

**REMARKS**

The Office Action of March 31, 2005 presents the examination of claims 1-11, 13-16, 18, 20, 22-26 and 28-34. Claims 1-11, 16, 18, 20, 26 and 30 have been canceled without prejudice. Claims 15, 24, 25, 28 and 31-34 have been amended. The specification has been amended. No new matter is inserted into the application. Upon entry of this Amendment, claims 15, 22-24, 25, 28, 29 and 31-34 will be pending.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw all rejections and allow the currently pending claims.

**Objection to the Specification**

The Examiner has objected to the specification since in the Brief Description of the Drawings section, the figures are not all discussed individually.

While continuing to traverse the objections of the Examiner, Applicant has chosen to amend the specification as follows to overcome these objections: "Figure 1 shows an exemplary solid support with probe array according to the present invention; Figure 2 shows incubation of the probe array of Figure 1 with a sample; and Figure 3 shows the probe array and solid support after hybridization and removal of unbound target." (added to page 18, line 23).

Support can be found throughout the specification, particularly on pages 32-34.

**Rejection under 35 U.S.C. § 112, second paragraph (Page 2 of the Office Action)**

The Examiner rejects claims 20, 22 and 23 under 35 U.S.C. § 112, second paragraph for allegedly being incomplete. While continuing to traverse these rejections, claim 20 is canceled without prejudice, thus rendering the rejection thereof moot. Applicants respectfully traverse the rejection of the pending claims. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

The Examiner asserts that these claims are confusing in referring to claim 19 which has been canceled. In order to overcome the rejection, but not to acquiesce to the Examiner's position, claims 22 and 23 have been amended to depend from claim 15.

Applicants respectfully submit that the pending claims particularly point out and distinctly claim the present invention, and therefore fully comply with 35 U.S.C. § 112, second paragraph. Withdrawal of the instant rejection is respectfully requested.

**Rejection under 35 U.S.C. § 102(b) and (e) (Page 2 of the Office Action)**

The Examiner rejects claims 1-11, 13-16, 18, 20, 22-26 and 28-34 under 35 U.S.C. § 102(b) and (e) as being clearly anticipated by either one of Chen et al (hereinafter "Chen") or Lockhart et al., US Patent No. 6,344,316 (hereinafter "Lockhart"). While continuing to traverse these rejections, claims 1-11, 16, 18, 20, 26 and 30 are canceled without prejudice, thus rendering the rejection thereof moot. Applicants respectfully traverse the rejection of the pending claims. Reconsideration of the claims and withdrawal of the instant rejection are respectfully requested.

The Examiner asserts that Lockhart discloses cross-hybridization of probes with target nucleic acids, while Chen discloses longer probes which must inherently cross-hybridize.

Applicant notes first that merely having longer probes does not guarantee any type of cross-hybridization, as cross-hybridization depends upon the interaction of the targets and the probes under particular hybridization conditions. Applicant therefore disputes that the invention is inherent in Chen, and respectfully requests that the Examiner provide a reference for this assertion, particularly given that the Examiner has noted that cross-hybridization is not disclosed in Chen.

While continuing to traverse the Examiner's assertion of inherent cross-hybridization in Chen, Applicant has chosen to amend the claims in order to expedite the prosecution. The amended claims now refer to methods and systems for determining differential expression of target oligonucleotides in a plurality of samples when at least one probe can hybridize to more than one target nucleic acid. Chen does not suggest or disclose such a system or method, also as noted by the Examiner.

Applicant also respectfully traverses the rejection over Lockhart. At the sections cited by the Examiner (as well as throughout the patent, including col. 72), Lockhart teaches away from the concept of using cross-hybridization as part of the method for measuring differential expression, because Lockhart seeks to minimize cross-hybridization. Thus, for Lockhart, cross-hybridization is an undesirable artifact.

By contrast, cross-hybridization is an important aspect of the function of the system and method of the present invention for determining differential expression.

While continuing to traverse the Examiner's assertion of inherent cross-hybridization in Lockhart, Applicant has chosen to amend the claims in order to expedite the prosecution. The amended claims now refer to methods and systems for determining differential expression of target oligonucleotides in a plurality of samples when at least one probe can hybridize to more than one target nucleic acid, such that cross-hybridization forms part of the function of the

system or method according to the present invention. Lockhart does not suggest or disclose such a system or method, and in fact teaches away from the concept of using cross-hybridization as part of the taught method.

### **Conclusion**

Applicants respectfully submit that the above remarks and/or amendments fully address and overcome the outstanding rejections and objections. For the foregoing reasons, Applicants respectfully request the Examiner to withdraw all of the outstanding rejections and objections, and to issue a Notice of Allowance indicating the patentability of the present claims. Early and favorable action of the merits of the present application is thereby respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If there are any additional fees associated with filing of this Preliminary Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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